ASCE 1981

COMBINED INDEX

AMERICAN SOCIETY OF CIVIL ENGINEERS FOUNDED 1852

ASCE 1981

Journals (Proceedings)
Civil Engineering,
Transactions,
Manuals and Reports,
and
Special Publications

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FOREWORD

The 1981 index, which provides a guide to information published by ASCE during 1981, combines material appearing in the Journals (Proceedings Vol. 107), CIVIL ENGINEERING (Vol. 51), Transactions (Vol. 146), Manuals and Reports, and Special Publications.

The user will find all articles and papers dealing with specific subject areas listed under one or more appropriate headings suggested by the content and application of the paper. The Engineers Joint Council "Thesaurus of Engineering Terms" has been used as the primary source of index terms. The Water Resources Thesaurus of the U.S. Department of the Interior and the Micro-Thesaurus compiled by the Soil Mechanics and Foundations Divisions of ASCE were also used.

The name index contains entries indexed under the names of author, co-authors, discussers, chairmen of committees preparing reports, and deceased members whose memoirs appeared in Transactions.

In the name index, the entry for a Proceedings Paper (under the first name if more than one author) is supplemented by information concerning the discussion, closure and Transactions digest, if applicable. To find what discussion, if any, there has been for a Proceedings Paper located in the subject index, the reader looks under the entry for the first-named author in the name index. When discussion of a paper from a prior year is published, the original entry is repeated. Discussion over a period of time can be traced until the closure to the paper is located.

When a paper appears in Transactions, the complete entry including original paper, discussion, closure, errata (if applicable), and Transactions citation appears in the name index.

Typical abbreviations used herein are:

Dsc for discussion
Clo for closing discussion
Corr for corrections
Err for errata
Chmn for Chairman of a committee submitting a report
TR for Transactions
TN for Technical Note

The original publication can be found from the index entry as follows:

EE1:Feb 81:47:16017
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indicates that the paper was published in the Journal of the Environmental Engineering Division, February 1981, on Page 47, as Proceedings Paper 16017. The notation TR:146:287 indicates that an abstract for the paper appears in *Transactions*, Vol. 146, on page 287.

The entry CE:Sept 81:68 indicates that an article can be found in CIVIL ENGINEERING, September 1981, on page 68.

Entries such as SP:81, 786pp indicate that the work is a special Publication or Manual and Report on Engineering Practice, published in 1981, and is 786 pages.

Journal codes are as follows:

CE	Civil Engineering Magazine
CO	Journal of the Construction Division
EE	Journal of the Environmental Engineering Division
EI	Issues in Engineering
EM	Journal of the Engineering Mechanics Division
EY	Journal of the Energy Division
GT	Journal of the Geotechnical Engineering Division
HY	Journal of the Hydraulics Division
IR	Journal of the Irrigation and Drainage Division
ST	Journal of the Structural Division
SU	Journal of the Surveying and Mapping Division
TC	Journal of the Technical Councils of ASCE
TE	Transportation Engineering Journal
UP	Journal of the Urban Planning and Development Division
WR	Journal of the Water Resources Planning and Management Division
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Bibliographies
Annotated Bibliography on Lifeline Earthquake Engineering, SP:81, 245pp.
Current Structural Engineering Reference Sources, Sam Chan, ST2:Feb 80:519:15211
Fixed Pile-Supported Steel Offshore Platforms, Peter W. Marshall, ST6:June 81:1083:16354
List of Sources and Reference Material on Pipeline Design, SP:80, 57pp.

Bicycle Lanes
Bicycle Transportation: A Civil Engineer's Notebook for Bicycle Facilities, SP:80, 189pp.

Bicycle Rider Fatalities
Bicycle Transportation: A Civil Engineer's Notebook for Bicycle Facilities, SP:80, 189pp.

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Miles to go; European and American Transportation Policies, by James A. Dunn, Jr. (Book Review), Betty McCarty, CE:Sept 81:37
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Historic Preservation of Engineering Works: Proceedings of an Engineering Foundation Conference, Emory L. Kemp, ed. and Theodore Anton Sande, ed., SP:81, 321pp.
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Proceedings of the Symposium on Surface Water Impoundments (2 vols), H. G. Stefan, ed., SP:81, 1682pp.
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Symposium on Deep Foundations, Frank M. Fuller, ed., SP:80, 534pp.
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The Hazardous Waste Dilemma: Issues and Solutions, John P. Collins, ed. and Walter P. Saukin, ed., SP:81, 329pp.

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Proceedings of the First International Conference on Computing in Civil Engineering, SP:81, 1212pp.

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Tall Building Criteria and Loading, Leslie E. Robertson, ed. and Takeo Naka, ed., SP:80, 888pp.

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1980 National Conference on Environmental Engineering, Walter Saukin, ed., SP:80, 707pp.

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Operation and Maintenance of Irrigation and Drainage Systems, SP:81, 261pp.
Proceedings of the 1980 Specialtiy Conference: Irrigation and Drainage, Today's Challenges, Jerry Eggleston, ed., SP:80, 496pp.
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Dynamic Response of Pile foundations: Analytical Aspects, Michael W. O'Neill, ed. and Ricardo Dobry, ed., SP:80, 112pp.
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Proceedings of the Second Speciality Conference on Dynamic Response of Structures: Experimentation, Observation, Prediction and Control, Gary C. Hart, ed., SP:80, 952pp.
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List of Sources and Reference Material on Pipeline Design, SP:80, 57pp.
Low Cost Seismic Strengthening of Power System, Otto W. Steinhardt, TC1:Apr 81:143:16196
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Social and Economic Impact of Earthquakes in utility Lifelines: Seismic Considerations in Lifelines Planning, Siting and Design, J. Isenberg, ed., SP:81, 244pp.
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Lifeline Earthquake Engineering: The Current State of Knowledge, 1981, D. J. Smith, Jr., ed., SP:81, 351pp.
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1980 National Conference on Environmental Engineering, Walter Saukin, ed., SP:80, 707pp.
The 1981 National Conference on Environmental Engineering, F. Michael Saunders, ed.., SP:81, 727pp.

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Symposium on Watershed Management 1980, 2 vols., SP:80, 1100pp.
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Ports '80, John Mascenik, ed., SP:80, 839pp.

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State-of-the-Art Report on Air-Supported Structures, Charles Birnstiel, Chmn., ASS:79, 95pp.

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Selected Papers by Alfred M. Freudenthal—Civil Engineering Classics, SP:81, 805pp.

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Ports '80, John Mascenik, ed., SP:80, 839pp.

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Evaluating Pile Performance During Earthquakes, Issa S. Oweis, TN: GT5:May 81:678:16221

Pile Foundations
Dynamic Response of Pile foundations: Analytical Aspects, Michael W. O'Neill, ed. and Ricardo Dobry, ed., SP:80, 112pp.
Pile Cap-Pile Group-Soil Interaction, Chandrakant S. Desai, Thangavelu Kuppusamy and Ahmad R. Alameddine, ST5:May 81:817:16254

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International Conference on Undergroud Plastic Pipe, Jay Schrock, ed., SP:81, 545pp.

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International Conference on Undergroud Plastic Pipe, Jay Schrock, ed., SP:81, 545pp.
List of Sources and Reference Material on Pipeline Design, SP:80, 57pp.
Managing the Alaska Pipeline Project, Frank P. Moolin, Jr. and Frieda A. McCoy, CE:Nov 81:51
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Proceedings of the Specialty Conference on Effective Management of Engineering Design, SP, 165pp.

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First Annual National Conference on Recreational Planning and Development (2 Vols.), SP:79, 757pp.
National Growth Trends, Robert B. Seaman, UP1: Nov 80:29:15824
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Structural Design of Tall Steel Buildings, Charles N. Gaylord, ed. and Makoto Watabe, ed., SP:79, 1057pp.

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Plastic Pipes
International Conference on Undergroud Plastic Pipe, Jay Schrock, ed., SP:81, 545pp.

Plastic Properties
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Classification of Hazardous Wastes, Albert J. Klee and Michael U. Flanders, EE1:Feb 80:163:15205
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Sediment Yield from Cultivated Lands: Selected Bibliography, Frank D. Masch, Michael A. Ports and A. R. Robinson, TN: HY1:Jan 81:124:15957

Pollution Control
Acid Rain, Charles G. Gunnerson, ed. and Beatrice E. Willard, ed., SP:79, 166pp.
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Ports
Ports '80, John Mascenik, ed., SP:80, 839pp.

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Water Forum '81, SP:81, 1378pp.

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Symposium on Watershed Management 1980, 2 vols., SP:80, 1100pp.

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The Planning and Engineering Interface with a Modernized Land Data System, G. Warren Marks, ed., SP:80, 262pp.

Recreation
Bicycle Transportation: A Civil Engineer's Notebook for Bicycle Facilities, SP:80, 189pp.
First Annual National Conference on Recreational Planning and Development (2 Vols.), SP:79, 757pp.

Recreational Vehicles
First Annual National Conference on Recreational Planning and Development (2 Vols.), SP:79, 757pp.

Recreation Facilities
First Annual National Conference on Recreational Planning and Development (2 Vols.), SP:79, 757pp.
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Civil Engineering Applications of Remote Sensing: Proceedings of the Speciality Conference of the Aerospace Division of the ASCE, Ralph W. kiefer, ed., SP:80, 192pp.
Remote Sensing for Nuclear Power Plant Siting, Barry S. Siegal and Charles W. Welby, TE3:May 81:317:16230

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Historic Preservation of Engineering Works: Proceedings of an Engineering Foundation Conference, Emory L. Kemp, ed. and Theodore Anton Sande, ed., SP:81, 321pp.
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Lifeline Earthquake Engineering: The Current State of Knowledge, 1981, D. J. Smith, Jr., ed., SP:81, 351pp.
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Second ASCE Conference on Civil Engineering and Nuclear Power, SP:78, 247pp.
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Structural Design of Tall Steel Buildings, Charles N. Gaylord, ed. and Makoto Watabe, ed., SP:79, 1057pp.
Tall Building Criteria and Loading, Leslie E. Robertson, ed. and Takeo Naka, ed., SP:80, 888pp.
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1980 National Conference on Environmental Engineering, Walter Saukin, ed., SP:80, 707pp.

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Inland Waters '80, Edward Silbermann, ed., SP:80, 92pp.
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Symposium on Watershed Management 1980, 2 vols., SP:80, 1100pp.
Urban Stormwater Management in Coastal Areas, Chin Y. Kuo, ed., SP:80

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Symposium on Watershed Management 1980, 2 vols., SP:80, 1100pp.
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Proceedings of the Symposium on Surface Water Impoundments (2 vols), H. G. Stefan, ed., SP:81, 1682pp.
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1980 National Conference on Environmental Engineering, Walter Saukin, ed., SP:80, 707pp.
The 1981 National Conference on Environmental Engineering, F. Michael Saunders, ed.., SP:81, 727pp.

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Ports '80, John Mascenik, ed., SP:80, 839pp.

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The 1981 National Conference on Environmental Engineering, F. Michael Saunders, ed., SP:81, 727pp.

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Water Forum '81, SP:81, 1378pp.

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Proceedings of the Seventeenth Coastal Engineering Conference (3 vols.), SP:81, 3171pp.

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Tall Building Criteria and Loading, Leslie E. Robertson, ed. and Takeo Naka, ed., SP:80, 888pp.
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Proceedings of the Fourth International Conference on Expansive Soils (2 vols.), SP:80, 917pp.
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